



# Volume 1

Chapter 1 – Introduction



# Chapter 1 Introduction

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Water supply and water quality are inseparable in water management. California must protect water quality to safeguard public and environmental health and secure the state's water supplies for their intended use. (DWR photo)

# Chapter 1 *Introduction*

## About This Chapter

Chapter 1 Introduction outlines the process for preparing the California Water Plan Update 2005 and its new features, which will become the cornerstone of future updates. It also explains the organization of all five volumes of Update 2005 and its Highlights brochure.

- Changing the Water Plan
- New Process
- New Features
- Phased Work Plan and Schedule
- Organization of Water Plan Update 2005

## Changing the Water Plan

The California Water Plan and its updates have been important sources of information for water planners since 1957 (see Box 1-1 Updates of the California Water Plan). As a master plan, it guides the orderly and coordinated control, protection, conservation, development, management, and efficient use of the water resources of the state (Water Code, § 10005(a)). Periodically, the California Department of Water Resources (DWR) has updated the water plan with revised estimates of future water demands and the delivery capability of existing and planned facilities. The difference between those estimates of water demand and supply is sometimes called “the gap.”

Over the past 30 years, California water management has changed significantly. State and federal projects have not expanded as originally expected; in fact, deliveries have been reduced in recognition of environmental needs. In response, regional water planning has begun to integrate multiple water and resource management activities to meet a wide range of local objectives. Water agencies, local governments, and the Legislature need a water plan that promotes and supports integrated regional water management and helps State government meet its responsibilities for improving statewide water management systems.

California Water Plan Update 2005 addresses our changing water management and better reflects the roles of the State and federal governments and the growing role of regional and local agencies in California water management. It goes beyond trying to forecast and quantify a simple “gap” between statewide supply and demand. It is a roadmap for meeting the state’s water demands through the year 2030. Update 2005 charts a Framework for Action that will help us sustain our water resource use and manage our supplies to ensure that water is available where and when it is needed. Its new features include a strategic plan with vision, goals, recommendations and implementation plan, an analytical approach with extended information and tools, use of water portfolios, regional reports, future scenarios, and resource management strategies.

In preparing this update, DWR sought the participation of California’s water communities, responded to new State laws, and developed a new framework to planning California’s water future. The result of this new and expanded public process is a water plan that includes the very best ideas for meeting our water challenges.

*California Water Plan Update 2005 charts a Framework for Action that will help us sustain our water resource use and manage our supplies to ensure that water is available where and when it is needed.*



By statute the California Water Plan cannot mandate actions nor authorize spending for its recommendations. California Water Plan Update 2005 makes neither project-specific nor site-specific recommendations; therefore, it does not include environmental review and documentation as required by the California Environmental Quality Act. **Consequently, policy-makers and lawmakers must take further action to adopt the recommendations in this water plan and develop funding methods to help in their implementation.** This underscores the

need to have broad public participation and support for the water plan in order to have its recommendations realized.

## New Process

This update recognizes the vital importance of working with the water community to define issues, identify potential management responses, and evaluate planning steps. Since January 2001 DWR has worked with a 65-member advisory committee, a 350-member extended review forum, and 2,000 interested

### Box 1-1 Updates of the California Water Plan (Bulletin 160 series)

The California Water Plan is the State's strategic plan for managing and developing water resources statewide. Since its first California Water Plan, published as Bulletin No. 3 in 1957, the Department of Water Resources has prepared 7 water plan updates, known as the Bulletin 160 series. The California Water Code now requires the water plan to be updated every five years. For fuller descriptions, see Volume 4 Reference Guide article "A Look Back at Past California Water Plans."

Bulletin No. 3 described a comprehensive master plan for the control, protection, conservation, distribution, and use of the waters of California to meet present and future needs for all beneficial uses in all areas of the state to the maximum feasible extent. The plan was intended to indicate the general manner in which California's water resources should be developed to satisfy its potential ultimate water requirements with emphasis on statewide water projects.

Statewide planning studies to update the California Water Plan have continued since 1961. Each update took a distinct approach to water resources planning, reflecting issues or concerns at the time of its publication.

Implementation of the California Water Plan (1966). The first of the Bulletin 160 series, Bulletin 160-66, proposed a pattern for implementation of specific parts of the California Water Plan as set forth by the California Water Code. Water policy concerns included flood control and floodplain management, power demands, water-related recreation, the relationship of fish and wildlife to water development, and water quality.

Water for California: The California Water Plan; Outlook in 1970. By 1967 the growth rate of California's population had slowed from that of the 1950s; population projections for 1990 and 2020 were reduced. Irrigated acreage estimates were also reduced, and more accurate information on the consumptive use of crops and the extent of water reuse was available. With projects then under construction or authorized, the report concluded that sufficient water supplies would be available to meet most of the 1990 requirements. The trend toward increasing environmental awareness was noted at both the national and state levels.

The California Water Plan: Outlook in 1974. This report concluded that the status of available supplies was favorable based on the premise that the Auburn, New Melones, and Warm Springs reservoirs and the Peripheral Canal would be operational by 1980. The report was less conclusive about the extent to which supplies would satisfy future needs, considering new California legislation for wild and scenic rivers. The update included a detailed section on water quality control (or basin) planning written by staff at the State Water Resources Control Board as well as water demand estimates for alternative futures for California population growth and agricultural acreage. Key water policy issues were cooling water for electric energy production, water deficiencies (risk), water exchanges, public interest in agricultural drainage (San Joaquin Drain), water use efficiency (water conservation), economic efficiency (water transfers), and wastewater reclamation. *continued*

members of the public. The advisory committee is composed of representatives of agriculture, urban water districts, businesses, environmentalists, American Indians, environmental justice advocacy, cities, counties, federal and State agencies, the California Bay-Delta Authority, academia, and different regions of California.

DWR sought a broadly informed and consensus-seeking process using facilitated large group meetings held roughly every six weeks for four and one-half years, more frequent smaller work groups and workshops, and many public briefings. Advisory committee members provided the Department with substantial suggestions and recommendations on all aspects of this update. See Volume 4 Reference Guide article, “The Advisory Committee View” by the California Water Plan Update 2005 public advisory committee.

As part of their membership obligations, advisory committee members periodically briefed their constituencies on key devel-

opments. Members relayed comments received during these briefings to DWR. The briefing process helped ensure two-way communication between members and their organizations. In addition, briefings formally expanded the dialogue beyond the advisory committee into a wider audience of potential users of California Water Plan Update 2005. Public outreach and involvement during the preparation of the plan are described in Volume 4 Reference Guide articles “Planning Framework for Water Plan Update” and “Customer and Stake Holders Survey.”

The Internet provided another principal venue for advisory committee work. DWR used e-government technology to set up Web pages and electronic surveys, and used e-mail correspondence and teleconferencing whenever possible. DWR posted meeting agendas, materials, and highlights, including draft copies of the water plan update, for all to see. DWR also posted data, assumptions, and documentation on the public Web site for use by advisory committee members and other interested parties.

#### *Box 1-1 continued from previous page*

The California Water Plan: Projected Use and Available Water Supplies to 2010 (1983). More of a technical report than were previous editions, this water plan included agricultural models applied for the first time. These were used in assessing the general economic effects of increasing water and energy costs. The report quantified the effect of urban and agricultural water conservation measures and the potential for water reclamation as a means of reducing additional water supply needs. Included in the update was a detailed statewide waterflow diagram titled Hydrologic Balance Network for California 1980.

California Water: Looking to the Future (1987). Bulletin 160-87 took a broad view of water events and issues in California. The report also discussed several leading water management concerns including water quality, the Sacramento-San Joaquin Delta, and a wide range of evolving water policies. One of its main conclusions was that in roughly three out of four years, California’s water resources, including rights to the Colorado River, were sufficient to meet all of its water needs for the foreseeable future.

California Water Plan Update: Bulletin 160-93 (1994). This report discussed how population growth, land use, and water allocations for the environment were affecting water resource management. It differed from the five previous water plan updates by (1) estimating environmental water needs separately and accounting for these needs along with urban and agricultural water demands, (2) presenting water demand management methods as additional means of meeting water needs, and (3) presenting separate water balance scenarios for average and drought conditions. This was the first Bulletin 160 update to incorporate an advisory committee of representatives of interested parties.

The California Water Plan Update: Bulletin 160-98 (1998). The 1998 update evaluated water management options that could improve California’s water supply reliability. Water management options being planned by local agencies were used as the building blocks to evaluate future water conditions for each of the state’s 10 hydrologic regions. Potential local options were integrated with options of a statewide scope to create a statewide evaluation.

To create a fair, open, and transparent process, the California State University Sacramento, Center for Collaborative Policy provided impartial third party facilitation and mediation design, implementation, and refinement for the consensus-seeking process. The center ensured advisory committee members' interests, views, and opinions were thoughtfully considered and advisory committee activities were governed by its own operating guidelines.

This new process is one of the significant accomplishments of this water plan. The principles of a fair, open, and transparent process should serve as the cornerstone for future updates because they (1) considerably expand public involvement and access to the State's water planning process; (2) seek collaborative recommendations that are stronger, have greater longevity, and are more likely to be adopted by the Governor's Office, Legislature, State, federal, and local agencies and

governments, and resource managers; and (3) produce a strategic plan with a vision, mission, goals, recommendations, and implementation plan.

## New Features

Following are some significant accomplishments of California Water Plan Update 2005 that provide California's water leaders with useful tools and can serve as the cornerstone for future updates.

### Strategic Planning Document

The water plan has become a strategic planning document that describes the role of State government and the growing role of California's regions in managing the state's water resources. (See Box 1-2 Strategic Plan: Components as Used for the Water Plan.) Considerable public involvement has brought strong recommendations to this strategic plan.

## Box 1-2 Strategic Plan: Components As Used for the Water Plan

**Internal/External Assessments.** Analysis and evaluation of key data and factors that influence the success of achieving the water plan's goals. In developing the water plan, the Department of Water Resources consulted with the Legislature and solicited and considered the views and suggestions of entities, such as water users, suppliers, and other stakeholders, potentially affected by or interested in the water plan.

**Vision.** A compelling and succinct statement of the desired future for California water resources and management. A vision statement crystallizes what the water plan visualizes California water to be in the future. It is not bound by time, represents global and continuing services, and serves as a foundation for future water planning.

**Mission.** The water plan's unique purpose and overarching reason for existence is described in statute. The mission statement succinctly identifies what the water plan should do and why and for whom it does it.

**Goals.** The desired results of the water plan and general ends toward which State government directs its efforts. Goals address the primary water issues facing California within broad groupings of interrelated state concerns. The goals are founded on the statewide vision and may involve coordination among several agencies with similar functions.

**Objectives.** The specific and measurable targets for accomplishing a goal. The recommendations of this water plan represent objectives. They mark interim steps toward achieving the plan's long-term mission and goals and emphasize the intended results of actions at a specific time.

**Action Plan.** A description of the key activities to implement each objective and the entities best positioned to play a key role in implementation. Action plans break objectives into manageable parts including near-term, high-priority actions and long-term comprehensive actions, resource assumptions, implementation challenges, and performance measures for tracking progress.

**Performance Measures.** The methods used to ensure accountability to measure work performed and results achieved. They describe what is to be measured and methods of measurement. The measures may be short term, intermediate, or long term. In contrast, evaluation criteria represent the technical information used by policymakers, water managers, and the public to compare how well proposed scenarios and resource management strategies would meet desired water management objectives. The criteria include parameters like the cost of implementing different resource strategies, environmental benefits, water reliability, and water quality improvements.



## Water Portfolios

State and regional water portfolios cover the entire hydrologic cycle and water quality conditions consisting of more than 80 categories of water use, supply, and management. Actual data are used for 3 recent but different water years—1998 (wet); 2000 (average), and 2001 (driest since extended drought when preparing this update). Water portfolios include flow diagrams, flow diagram tables, water balances, water quality reports, and summary table and charts and identify data gaps. Water balances do not include the additional 1 million to 2 million acre-feet per year needed to eliminate statewide groundwater overdraft. (See Volume 3 Regional Reports, Chapter 1 State Summary for more information about the water portfolio concept.)

## Regional Reports

In compliance with SB 672 (Stats. 2001, ch. 320), a regional report has been prepared for each of the 10 hydrologic regions, as well as the Sacramento-San Joaquin River Delta, and the Mountain Counties overlay area (Figure 1-1 Hydrologic regions with Mountain Counties and Legal Delta). Each report includes the region's major challenges, current programs and projects, future outlook, and water portfolio.

## Future Scenarios

To acknowledge that we don't know with certainty what will happen in the future, this water plan update has three plausible yet very different baseline scenarios for 2030, rather than a single "likely future." Each scenario describes a different baseline for 2030, to which the water community would need to respond by implementing a mix of management strategies. The scenarios are created by varying assumptions about important factors that affect water use and supplies, but the water community has little control regarding population growth, development patterns, crop markets, industrial productivity, and environmental regulations. The three baseline scenarios developed for Update 2005 are Current Trends, Less Resource Intensive, and More Resource Intensive.

## Resource Management Strategies

This water plan update describes a broad and diverse set of 25 resource management strategies. They are available to regions for stronger integrated regional water management to meet future demands and sustain the environment, resources, and economy, involve communities in decision-making, and meet various goals. A resource management strategy is a project, program or policy that helps local agencies and governments manage their water and related resources (see Volume 2 Resource Management Strategies). For example, urban water

use efficiency is a strategy to reduce urban water use. A pricing policy or incentive for customers to reduce water use also is a strategy. New water storage to improve water supply, reliability, and quality is another strategy. Each region needs to choose an appropriate mix of strategies based on its own water management objectives and goals (See Box 1-3 Water Management Objectives).

To implement these new features, DWR has made, and needs to make, significant analytical changes as summarized in Box 1-4 Analytical Changes and described in Chapter 4 Preparing for an Uncertain Future.

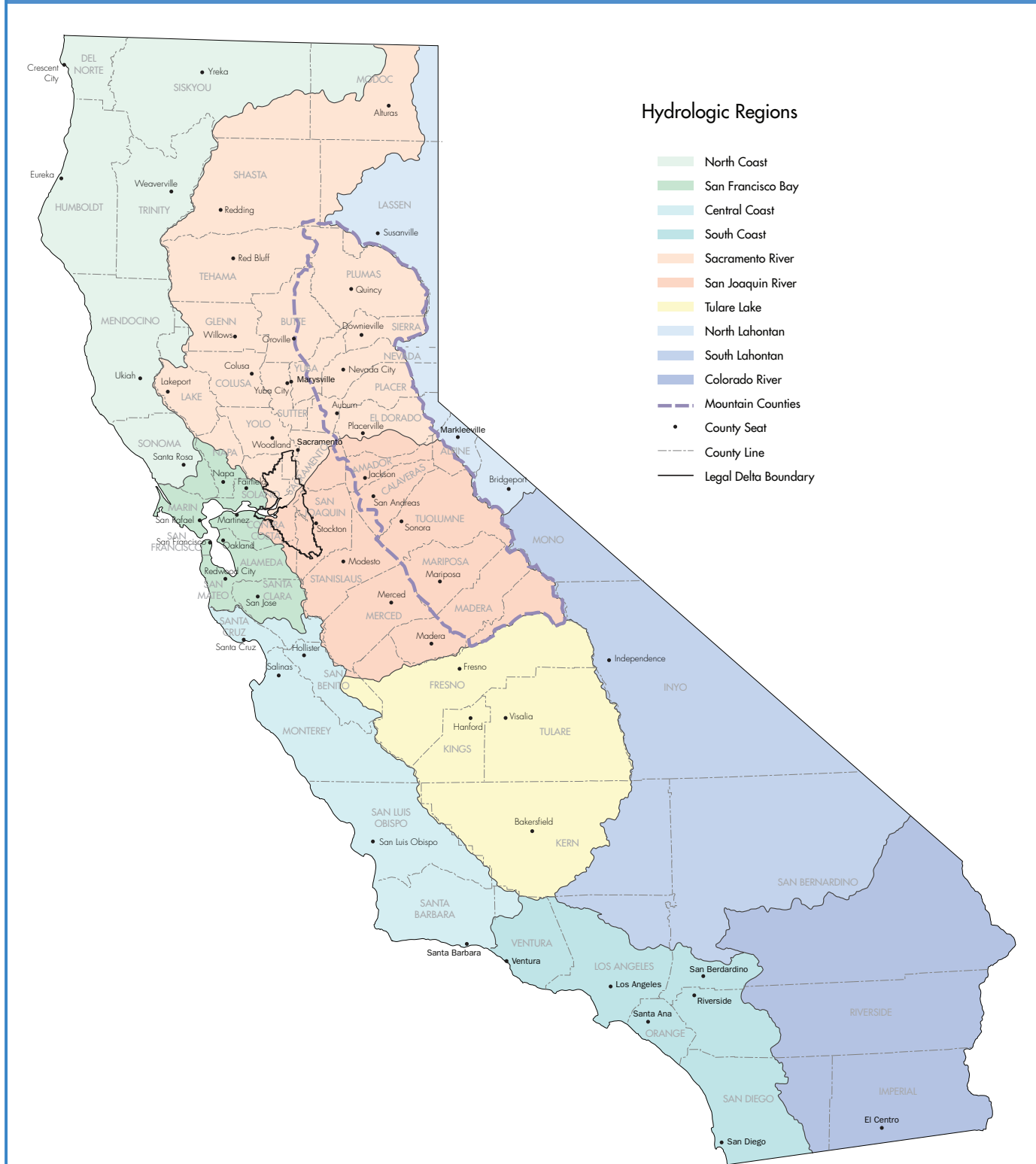
## Phased Work Plan and Schedule

DWR will meet California Water Code requirements under a phased work plan and develop analytical tools and acquire data for the next water plan update. (See Box 1-5 Legal Requirements for California Water Plan and Volume 4 Reference Guide article "Work Plan for Meeting Legal Requirements for the California Water Plan.") The new, additional data and studies will help regional and local agencies in integrated water resource management.

- Phase 1: Distribution of the public review draft of the five-volume publication from April through July 2005 marked the end of the first phase. This water plan update is based on the best available data and information and input from an active and diverse advisory committee. Update 2005 recommends policy and priorities, documents gaps in data and analytical tools, and describes an approach for future quantitative analysis.
- Phase 2: This phase began in 2004 and provides a final California Water Plan Update 2005 with changes to the public review draft based on broad public input and numerous public workshops. Phase 2 also documents the data, analytical tools, methods, and assumptions DWR will use in Phase 3.
- Phase 3: Phase 3 begins in 2006 when DWR initiates the process for the next water plan update with participation of a broad public advisory committee. DWR will begin to quantify and evaluate 3 future scenarios and alternative management responses using the data and tools identified in Phase 2. A waterflow diagram will present evaluation results for wet and dry year conditions, and a California Department of Food and Agriculture food forecast will be used to estimate future irrigated crop water use for one future scenario.

As part of an ongoing strategic planning process, DWR will present Phase 3 evaluations to the public as they become available. And as a strategic plan, the findings, recommendations, and the implementation plan of California Water

Figure 1-1 Hydrologic Regions with Mountain Counties and Legal Delta



The California Department of Water Resources divides the state into 10 hydrologic regions that correspond to its major drainage basins. This water plan update also describes the Mountain Counties and Sacramento-San Joaquin Delta as two overlay areas of special interest.

### Box 1-3 Water Management Objectives

Several of the goals and recommendations of this water plan relate to the water management objectives described here and shown in the strategy summary table in Volume 2 Resource Management Strategies. Local managing entities use water management objectives to identify and focus on the most important issues in meeting their resource needs. These objectives support the goal of a reliable supply for sustaining the beneficial uses of water in their particular area. There is no fixed set of management objectives for any given planning area. Management objectives may range from being entirely qualitative to strictly quantitative. Threshold values associated with management objectives may be locally determined. For example, in establishing a management objective for groundwater quality, one area may choose to establish an average value of total dissolved solids as the indicator of whether a management objective is met, and another may choose to have no constituents exceeding the maximum contaminant level for public drinking water standards.

**Provide water supply benefits.** Reduce water demands, improve operational efficiency, redistribute water, and/or augment water supplies.

**Improve drought preparedness.** Reduce the economic, environmental, and social impacts of drought on regions including activities that increase water conservation, reduce dry year demand, increase surface water or groundwater storage, allow short-term transfers of surplus water, or increase reuse of water.

**Improve system flexibility and efficiency.** Link and operate water management facilities in a way that increases beneficial use and reuse of water overall. For example, additional interconnection among neighboring water districts can help short-term water transfers during dry years and reduce the impacts of drought.

**Improve water quality (all use sectors).** Improve water quality by matching water quality to its use or by using treatment technology. Other water management strategies, such as storage, conveyance, and water use efficiency, may also benefit water quality. Water quality is also improved by preventing or reducing pollution, agricultural drainage, and urban runoff.

**Reduce groundwater overdraft.** Reduce the condition in which over the long term the amount of groundwater withdrawn by pumping exceeds the amount of water that recharges the basin. Groundwater overdraft is characterized by groundwater levels that decline over a period of years and never fully recover, even in wet years.

**Reduce flood impacts.** Reduce flood damage to life and property by minimizing flow impacts to developed land, maintaining or restoring natural floodplain processes, removing obstacles within the floodplain voluntarily or with compensation, educating the public about avoiding flood risks and planning for emergencies, developing policies for appropriate land use in undeveloped floodplains.

**Provide environmental benefits.** Protect, restore, or enhance watersheds and ecosystems. This may include instream flow and timing changes, temperature management, habitat restoration, physical modification to water bodies, reduction of diversion impacts to fisheries (for example, fish screens), control of waste discharge in waterways, exotic species control, removal of barriers to anadromous fish migration, land and water acquisitions, managed wetlands, and fire management.

**Increase energy generation or reduce use.** Generate additional energy supplies or reduce energy consumption.

**Increase recreational opportunities.** Provide or enhance recreational opportunities in freshwater bodies, such as lakes, reservoirs, and rivers, and outdoor recreation activities near water, such as wildlife viewing, picnicking, camping, and hiking.

**Integrate and optimize management strategies.** Improve the ability of resource planners and managers to optimally mix and match the maximum number of resource management strategies in their regional plans.

**Reduce uncertainty to minimize risk.** Reduce the uncertainty and risks associated with water planning and management decisions because of data gaps, insufficient analytical capabilities, incomplete scientific understanding, short- and long-term climate variations, and unpredictable and catastrophic events.

Plan Update 2005 will be reviewed and revised periodically. DWR plans to publish five other water plan updates during this plan's 2030 planning horizon.

## Organization of California Water Plan Update 2005

California Water Plan Update 2005 is organized in five volumes: (1) The Strategic Plan, (2) Resource Management Strategies, (3) Regional Reports, (4) Reference Guide, and (5) Technical Guide. It includes recently compiled water data, information, and studies

used to develop the strategic plan. It identifies the most pressing water management issues and challenges affecting the state and its regions. It describes short-term and long-term actions that can be implemented at the state and regional level. It considers future uncertainties, scenarios, and their water demands; and describes a comprehensive set of resource management strategies and an approach for improving data and analytical tools needed to make better water management and planning decisions. All the volumes plus the brochure "California Water Plan Highlights" and supporting data and information are available on the water plan Web site ([www.waterplan.water.ca.gov](http://www.waterplan.water.ca.gov)).

### Box 1-4 Analytical Changes

#### Water portfolios

The water portfolios and water balances in this water plan update include actual data for a recent dry water year—2001. Planning for drought conditions, that is, extreme and prolonged dry years, is significant for water resources planners, managers, and decision-makers. A drought cannot be described by using actual data for a single water year. Previous water plans considered drought conditions by using trend-based data from a sequence of dry years.

#### Regional reports

It is important to note that estimates of future statewide average-year water demands, however small or large, do not adequately characterize the challenges facing California water. Increases in water demand must be addressed at regional and local scales because available supplies in one part of the state cannot necessarily be used to meet rising demands in another part. As local demands increase, more severe local water shortages could occur than in recent experience during drier water years. Moreover, the challenges of flood management, protecting water quality, and managing water systems to help restore the environment will all require California's water managers to develop strong water plans that go well beyond just meeting water demand increases in average years.

#### Future scenarios

Rather than use the prior method for forecasting future water conditions, the Department of Water Resources with advisory committee input decided to initiate a phased work plan to develop the data and analytical tools that can be used to analyze multiple future scenarios and alternative mixes of resource management strategies. Consequently, California Water Plan Update 2005 does not include quantified water balances for future conditions with a shortage analysis as presented in prior updates. Until this quantification occurs, the narratives for three future scenarios and the preliminary scenario water demand estimates cannot be compared to forecasts of shortage from previous updates because of significant differences in the method and level of analysis.

#### Resource management strategies

In this update, the estimates of potential water supply benefits for the resource management strategies (summarized in Strategy Summary Table in Volume 2) are quantified on a statewide basis. Therefore, they cannot be used to evaluate local shortages. For example, water supply benefits achieved in an area that does not have a water shortage may not contribute to reducing a shortage elsewhere. However, the supply benefit may serve other useful purposes in the area it occurs. The Department of Water Resources plans to work with regional and local partners to develop the necessary data and analytical tools to allow future phases of the California Water Plan update to provide a more comprehensive evaluation of a variety of management responses for a number of plausible scenarios.



## Water Plan Update 2005 Highlights and Introductory Video

A brochure highlights key findings and recommendations of the water plan update and describes foundational actions that must be central to California water management to assure sustainable water resource use. It discusses the initia-

tives needed to achieve the foundational actions to stimulate progress toward assuring that our water supplies are reliable through 2030. It also notes a number of essential support activities needed to accomplish the foundational actions and initiatives. An introductory video, "Water for Tomorrow," is available on DVD.

### Box 1-5 Legal Requirements for California Water Plan

At a minimum, California Water Plan Update 2005 must meet requirements specified in the California Water Code regarding its purpose, content, and process. The advisory committee, extended review forum, and public may suggest additions to the water plan update that do not conflict with the Water Code. For details see Volume 4 Reference Guide article "Work Plan for Meeting Legal Requirements for the California Water Plan."

#### Purpose

The following excerpts from the Water Code and other legislation address the purpose of the California Water Plan and its updates:

- A long-term, reliable supply of water is essential to protect and enhance California's natural resources and economic climate. (Stats 2000, ch. 720, § 1(a))
- The plan for the orderly and coordinated control, protection, conservation, development, management and efficient utilization of the water resources of the State, which is set forth and described in Bulletin No. 1 of the State Water Resources Board titled "Water Resources of California," Bulletin No. 2 of the State Water Resources Board titled, "Utilization and Requirements of California," and Bulletin No. 3 of the Department of Water Resources (DWR) titled, "The California Water Plan," with any necessary amendments, supplements, and additions to the plan shall be known as "The California Water Plan." (Water Code, § 10004(a))
- The California Water Plan is accepted as the master plan which guides the orderly and coordinated control, protection, conservation, development, management and efficient utilization of the water resources of the state. (Water Code, § 10005(a))
- The California Water Plan "does not constitute approval for the construction of specific projects or routes for transfer of water or for financial assistance by the state without further legislative action, nor shall [The California Water Plan] be construed as a prohibition of the development of the water resources of the state by any entity." (Water Code § 10005(b)).

#### Content

The following excerpts from the Water Code and other legislation address the content of the California Water Plan and its updates:

- Without credible and accurate estimates of water supply needs, it is impossible to ensure that water programs, policies, and investments are appropriate to meet all residential, commercial, industrial, agricultural, and environmental needs (Stats 2000, ch. 720, § 1(c))
- ... to ensure the state makes appropriate investments in water programs, policies, and facilities, there needs to be a credible and objective assessment of the state's future water supply needs. (Stats 2000, ch. 720, § 1(e))
- As part of the requirement of the department to update The California Water Plan ... the department shall include in the plan a discussion of various strategies that may be pursued to meet the State's future water needs, including, but not limited to, those relating to the development of new water storage facilities, water conservation, water recycling, desalination, conjunctive use, and water transfers that may be pursued to meet the future water needs of

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## Volume 1 Strategic Plan

**Chapter 1 (Introduction).** This chapter outlines the public process that figures significantly in California Water Plan Update 2005. This process is intended to become the standard for future water plan updates. It also discusses new features of this water plan update and describes the organization of the multivolume water plan update.

**Chapter 2 (A Framework for Action).** This chapter lays out State government's role in supporting regions through leadership, assistance, and oversight as they assume a central role in California water management. The water plan's strategic plan with vision, mission, goals, and recommendations is described here. It identifies foundational actions, key initiatives, and near-term actions that will stimulate progress toward meeting our water challenges while building a future that assures sustainable water uses and reliable water supplies. The near-term actions are part of the implementation plan in Chapter 5.

**Chapter 3 (California Water Today).** This chapter reviews California water conditions, challenges, and State, federal, and regional responses since the previous water plan update. Challenges from regional reports are summarized here and detailed in Volume 3 Regional Reports.

**Chapter 4 (Preparing for an Uncertain Future).** This chapter examines a new planning and analytical approach for addressing future uncertainties; includes discussion of significant factors affecting future conditions; and describes a partial implementation of the new analytical approach, including three future scenarios.

**Chapter 5 (Implementation Plan).** For the first time, the water plan includes proposals for carrying out its recommendations. Chapter 5 lists the 14 recommendations of the strategic plan and for each one includes specific near-term and comprehensive long-term actions, resources assumptions, implementation challenges, and performance measures. This implementation plan will focus State leadership and guide State and regional actions in managing California's water resources through 2030.

## Volume 2 Resource Management Strategies

Volume 2 includes narratives for 25 resource management strategies (presented alphabetically). As used in this water plan, a resource management strategy is a project, program, or policy that helps California's local agencies and governments manage their water and related resources. Strategies can be combined in various ways to meet the water management objectives and

### Box 1-5 continued from previous page

the state. The department shall also include a discussion of the potential for alternative water pricing policies to change current and projected uses. (Water Code § 10004.5)

- The department shall include in the plan a discussion of the potential advantages and disadvantages of each strategy and an identification of all federal and state permits, approvals, or entitlements that are anticipated to be required in order to implement the various components of the strategy. (Water Code, § 10004.5)

## Recently Enacted Legislation

SB 1062 (Stats 1999, ch. 210) - The California Water Plan. Requires DWR to include in water plan updates various strategies for meeting the state's water supply needs. The update must identify all federal and State permits, approvals, or entitlements that may be required in order to implement the strategies. It also establishes an advisory committee to help DWR update the plan.

SB 1341 (Stats 2000, ch. 720) - State Water Plan. Requires DWR to release a preliminary draft of the water plan's assumptions and estimates and restructures Water Code section 10004 relevant to the California Water Plan.

SB 672 (Stats 2001, ch. 320) - Regional Planning & Water Plan Update. Requires that the California Water Plan include a report on each hydrologic region's development of regional and local water projects to improve water supplies to meet municipal, agricultural, and environmental water demands and minimize the need to import water from other hydrologic regions. It also requires that urban water suppliers describe in their urban water management plans the management tools and options they use to maximize resources and minimize the need to import water from other regions.

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values of different regions and to achieve benefits for many natural resources. The volume's introduction gives an overview of the 25 resource management strategies and describes how each strategy narrative is organized. Each strategy narrative includes recommendations to facilitate its implementation.

### Volume 3 Regional Reports

Volume 3 includes regional reports for the state's 10 hydrologic regions, the Delta, and a Mountain Counties overlay area, as well as a state summary. Each report includes a discussion of the region: key challenges; ongoing programs; and water portfolio data and information on water supplies and uses for water years 1998, 2000, and 2001.

### Volume 4 Reference Guide (The Encyclopedia Water Plan)

Volume 4 includes general reference information on California water resources and facilities from prior water plan updates and articles prepared for, or related to, this water plan that support material in volumes 1, 2, or 3. In past water plans, this information was interspersed throughout the document. DWR has consolidated this reference material in the Reference Guide to make it more accessible and to streamline Volume 1. The articles are organized by topic and presented alphabetically by title. The Reference Guide will be updated periodically on the water plan Web site ([www.waterplan.water.ca.gov](http://www.waterplan.water.ca.gov)).

### Volume 5 Technical Guide (Online Documentation)

Volume 5 documents the data, analytical tools, and methods used to prepare Update 2005. The Technical Guide is organized and formatted as a Web site to document the data, analytical tools, and methods used to prepare California Water Plan Update 2005. (For link to Volume 5, go to ([www.waterplan.water.ca.gov](http://www.waterplan.water.ca.gov).)

#### *Box 1-5 continued from previous page*

SB 1672 (Stats 2002, ch. 767) - Integrated Regional Water Management Planning. Authorizes local public agencies to form regional water management groups and adopt regional plans to address "qualified programs or projects." This bill requires DWR and other departments to give preference to "qualified programs or projects" when establishing criteria for funding under various programs.

AB 857 (Stats 2002, ch. 1016) - State Strategic Planning. Establishes three specific planning priorities for State strategic plans:

- To promote infill development and equity by rehabilitating, maintaining, and improving existing infrastructure, particularly in underserved areas, and to preserving cultural and historical resources.
- To protect, preserve, and enhance environmental and agricultural resources, including working landscapes (farm, range, and forest lands), natural lands (wetlands, watersheds, wildlife habitats, and other wildlands), recreation lands (parks, trails, greenbelts), and other open space.
- To encourage efficient development patterns.

AB 2587 (Stats 2002, ch. 615) - Food: Water Usage Forecasts. Requires the Department of Food and Agriculture to estimate production of food, fiber, livestock, and other farm products and to provide that information to the DWR for estimating related water usage reported in Bulletin 160.